

Appl. No. 10/827,088  
Docket No. 9606  
Amdt. Dated February 10, 2009  
Reply to Office Action mailed on December 9, 2008  
Customer No. 27752

## REMARKS

### Claim Status

Claims 1-16 are pending in the present application. No additional claims fee is believed to be due.

Claims 1, 11 and 14 have been amended to more clearly define the disposable absorbent article and method in accordance with the teachings of the specification, for example, at page 15, lines 26-29.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

### Rejections Under 35 USC §103 Over Castello in view of Pierce and Townsend

Claims 1, 2 and 8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Castello (US 4,931,051) in view of Pierce et al. (WO 00/76438) and Townsend (US 4,287,153). The Office Action asserted that Castello teaches a diaper having a backsheet (190), a topsheet (170) and an absorbent core (180). The Office Action further asserted that Castello teaches a color wetness indicator printed onto a surface of a backsheet of the diaper (col 2, lines 30-62) and a coating or varnish over the wetness indicator to prevent premature activation (col. 5, lines 14-21). The Office Action noted that Castello fails to teach that the color wetness indicator is hydrolyzable. The Office relied on Pierce as disclosing an absorbent article having wetness indicating graphics that dissolve in response to urine or water such that the graphic becomes visible. The Office Action also asserted that Townsend teaches an absorbent article (1) having a water indicating graphics (2) made of a latent color pigment material that undergoes a hydrolytic reaction in response to urine or saline water. The Office concludes that it would have been obvious to one of ordinary skill in the art to substitute the graphics compositions of Pierce for use as the wetness indicator material in the articles of Castello.

Under MPEP 2142, the Office bears the burden of factually supporting any *prima facie* conclusion of obviousness. In determining the differences between the cited art and the claims, the question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. See, *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983). If the Office does not prove a *prima facie* of unpatentability, then without more, the Applicant is entitled to the grant of the patent. See in re *Oetiker*, 977 F.2d 1443.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the Office must meet three basic criteria. First, there must be some suggestion or motivation, either in the reference itself, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the cited references must teach or suggest all the claim limitations. See, for example, *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Applicants respectfully assert that the Office Action fails to make a *prima facie* case of obviousness under 35 U.S.C. §103.

Castello discloses a wetness indicator used on absorbent pads such as diapers for signaling the presence of water. Castello teaches that the active component of the wetness indicator is a hydratable salt which undergoes a color change when it transforms from an anhydrous compound to a hydrated compound. (See column 3, lines 37-40). According to the specification, the color change is the result of hydration, i.e. the chemical process of combining with water, where water maintains itself. (See column 4, lines 22-31). In contrast, independent claim 1 recites a wetness indicator comprising a hydrolyzable color composition. That is, the color composition of claim 1 changes color as the result of hydrolysis, i.e. the chemical process of splitting water into proton and hydroxide (water enters the reaction and becomes part of the end products). As a result, the color composition undergoes a chemical reaction so that the graphic changes from invisible to visible to the unaided eye, i.e. the graphic appears. As discussed in the present specification, prior to wetting, the graphic is not visible to the unaided eye, i.e. it is transparent, because it typically assumes the color of the backsheet on which it is printed. (See p. 11).

Moreover, the deficiencies of Castello are not resolved by Pierce or Townsend. Pierce is directed to a disposable absorbent article that includes active graphics that can change color during use and can provide an interactive training aid. In particular, the reference relates to an absorbent article comprising: an outer cover having an interior surface, an opposite exterior surface and a first color; an absorbent assembly disposed on the interior surface; and an active graphic disposed on the outer cover and comprising a color change composition, the active graphic having a pre-activation color different from the first color and a post-activation color substantially the same as the first color. Irrespective of these teachings, however, the reference fails to teach or suggest a graphic, like Applicant's color composition, that changes from invisible to visible as the result of hydrolysis. Rather, Pierce teaches one or more active graphics that are made of a material that dissolves in response to urine or water, i.e. water-soluble. There is no mention or teaching by Pierce of a ink composition that undergoes hydrolysis in order to form a graphic that "appears" upon wetting.

Further, it is Applicant's understanding that Townsend is directed to a saline water indicator material comprised of a water insoluble polymeric ion exchange material (for example, cellulosic substrate) chemically bound with a water insoluble polymeric exchanged ion indicator. In addition, Townsend teaches that prior to exposure to saline/urine, the disposable article exhibits a visible color, for example, green when viewed from the outward side of the transparent backsheet. (See Ex. 1, col. 14). After exposure to saline/urine, Townsend teaches a visible color change, for example, from green to yellowish-orange. (See Ex. 1, col. 14). Irrespective of these teachings, however, the reference fails to teach or suggest a graphic, like Applicant's color composition, that changes from invisible to visible as the result of hydrolysis. Rather, Townsend teaches an indicator material that changes from one visible color to another visible color in the presence of saline/urine.

References relied upon to support a rejection under 35 U.S.C. 103(a) must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, 203 U.S.P.Q. 245 (CCPA 1979). Because the cited combination

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fails to teach all of the claim limitations of claim 1, the Office Action has not established a *prima facie* case of obviousness and has not placed the presently claimed article in the possession of the public. Since claims 2 and 8 depend directly from claim 1, the cited combination also fails to teach all of their claim limitations. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). Therefore, Applicants assert that claims 1, 2 and 8 are nonobvious over the cited combination and are in condition for allowance.

Claim 3 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Castello and Townsend in view of Timmons et al (US 4,022,211). The deficiencies of the Castello and Townsend references are not resolved by Timmons. While Timmons teaches the use of alcohol as a solvent, Applicant finds no teaching by Timmons of a disposable absorbent article as defined by claim 1 and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible. Since claim 3 depends indirectly from claim 1, the cited combination also fails to teach all of its claim limitations. *In re Fine*, supra. Therefore, Applicant asserts that claim 3 is nonobvious over the cited combination and are in condition for allowance.

Claims 4 and 5 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Castello and Townsend in view of Schleinz et al (US 5458590) and Claim 6 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Castello and Townsend in view of Ito et al (US 5595754). The deficiencies of the Castello and Townsend references are not resolved by Schleinz et al. While Schleinz et al teaches an ink blend comprising n-propyl acetate, Applicant finds no teaching by Schleinz et al of a disposable absorbent article as defined by claim 1 and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible. Moreover, the deficiencies of the Castello and Townsend references are not resolved by Ito et al. While Ito et al teaches absorbent color-changing sheets which use polyamides as resins in an impermeable layer, Applicant finds no teaching by Ito et al of a disposable absorbent article as defined by claim 1 and containing a wetness indicator comprising a

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hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible.

Since claims 4 and 5 depend indirectly from claim 1, the cited combination also fails to teach all of their claim limitations. *In re Fine*, supra. Therefore, Applicant asserts that claims 4 and 5 are nonobvious over the cited combination and are in condition for allowance.

Rejection Under 35 USC §103(a) Over Castello and Pierce  
and further in view of Olson

Claims 7 and 11 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Castello and Townsend in view of Olson et al (WO 00/76442).

In order to establish a *prima facie* case of obviousness, the three requirements discussed above must be met. See MPEP §2143. Applicants respectfully traverse this rejection because the Office Action fails to establish a *prima facie* case of obviousness.

As discussed previously, the Castello reference teaches a wetness indicator comprising a salt that undergoes a color change upon hydration as opposed to the hydrolyzable color composition as recited in claims 1 and 11. Further, it is Applicant's understanding that Townsend is directed to an indicator material that changes from one visible color to another visible color in the presence of saline/urine. However, Applicant finds no teaching by Castello or Townsend of an ink composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claims 1 and 11.

While Olson et al teaches an absorbent article having a changing wetness indicator printed on an inner surface of a backsheet, Applicant finds no teaching by Olson et al of a disposable absorbent article as defined by claim 1 or the method of printing defined by claim 11, and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible.

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References relied upon to support a rejection under 35 U.S.C. 103(a) must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, supra. Because the cited combination fails to teach all of the claim limitations of claims 1 and 11, the Office Action has not established a *prima facie* case of obviousness and has not placed the presently claimed disposable absorbent article or method of printing in the possession of the public. Since claim 7 depends from claim 1, the cited references also fail to teach all of its claim limitations. Therefore, Applicant asserts that claims 7 and 11 are nonobvious over the cited combination and are in condition for allowance.

Rejection Under 35 USC §103(a) Over Castello and Townsend in view of Polansky et al

Claims 9 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Castello and Pierce in view of Polansky et al. (US 4,249,532).

In order to establish a *prima facie* case of obviousness, the three requirements discussed above must be met. See MPEP §2143. Applicants respectfully traverse this rejection because the Office Action fails to establish a *prima facie* case of obviousness.

As discussed previously, the Castello reference teaches a wetness indicator comprising a salt that undergoes a color change upon hydration as opposed to the hydrolyzable color composition as recited in claim 1. Further, it is Applicant's understanding that Townsend is directed to an indicator material that changes from one visible color to another visible color in the presence of saline/urine. However, Applicant finds no teaching by Castello or Townsend of an ink composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claim 1.

The deficiencies of the Castello and Townsend references are not resolved by Polansky et al. In the Office Actions dated May 26, 2006, October 31, 2006, April 19, 2007, October 4, 2007 and December 9, 2008, the Office stated that: "Polansky teaches a seal coat underlying a graphic design." Applicants respectfully disagree with the Office's characterization of the placement of the seal coat as taught by Polansky et al.

Specifically, Polansky et al discloses that design 16 is imprinted on an inner side 17 of a polyethylene sheet 13 so as to be visible for the outer side 18. (See column 1, lines 58-61). Further, Polansky et al teaches that after imprinting design 16 a seal coat 24 covers the printed colors. (See column 2, lines 8-10) Thus, the sealing coat of Polansky is disposed over the design rather than underneath, i.e. sheet 13, design 16 and sealing coat 24 disposed over design 16. In contrast, claim 10 recites a varnish coating disposed beneath the color composition so that the varnish coating is between the substrate and the color composition.

Notwithstanding, Applicant finds no teaching by Polansky et al of a disposable absorbent article as defined by claim 1 and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible.

References relied upon to support a rejection under 35 U.S.C. 103(a) must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, supra. Because the cited combination fails to teach all of the claim limitations of claim 1, the Office Action has not established a *prima facie* case of obviousness and has not placed the presently claimed disposable absorbent article in the possession of the public. Since claims 9 and 10 depend directly or indirectly from claim 1, the cited references also fail to teach all of their claim limitations. Therefore, Applicant asserts that claims 9 and 10 are nonobvious over the cited combination and are in condition for allowance.

Rejection Under 35 USC §103(a) Over Castello and Townsend in view of Perrault

Claim 13 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Castello and Townsend in view of Perrault et al (US 4717378).

In order to establish a *prima facie* case of obviousness, the three requirements discussed above must be met. See MPEP §2143. Applicants respectfully traverse this rejection because the Office Action fails to establish a *prima facie* case of obviousness.

As discussed previously, the Castello reference teaches a wetness indicator comprising a salt that undergoes a color change upon hydration as opposed to the hydrolyzable color composition as recited in claim 1. Further, it is Applicant's understanding that Townsend is directed to an indicator material that changes from one visible color to another visible color in the presence of saline/urine. However, Applicant finds no teaching by Castello or Townsend of an ink composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claim 1.

While Perrault teaches a method for detecting dehydration of a hydrogel which includes using D&C Red #27, Applicant finds no teaching by Perrault of a disposable absorbent article as defined by claim 1 and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claim 1.

References relied upon to support a rejection under 35 U.S.C. 103(a) must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, supra. Because the cited combination fails to teach all of the claim limitations of claim 1, the Office Action has not established a *prima facie* case of obviousness and has not placed the presently claimed disposable absorbent article in the possession of the public. Since claim 13 depends indirectly from claim 1, the cited references also fail to teach all of its claim limitations. Therefore, Applicant asserts that claim 13 is nonobvious over the cited combination and are in condition for allowance.

Rejection Under 35 USC §103(a) Over Castello and Townsend in view of Howell

Claims 14 and 16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Castello and Townsend in view of Howell et al (US 5,389,093).

In order to establish a *prima facie* case of obviousness, the three requirements discussed above must be met. See MPEP §2143. Applicants respectfully traverse this rejection because the Office Action fails to establish a *prima facie* case of obviousness.



As discussed previously, the Castello reference teaches a wetness indicator comprising a salt that undergoes a color change upon hydration as opposed to the hydrolyzable color composition as recited in claims 1 and 14. Further, it is Applicant's understanding that Townsend is directed to an indicator material that changes from one visible color to another visible color in the presence of saline/urine. However, Applicant finds no teaching by Castello or Townsend of an ink composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claims 1 and 14.

While Howell teaches a thermochromatic ink comprising a fatty acid that changes from a solid state to a liquid state when heated, such change effectuating the color change, Applicant finds no teaching by Howell of a disposable absorbent article as defined by claim 14 containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction forming a carboxylic acid, and resulting in said graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claims 14 and 16. Thus, the carboxylic acid is formed after wetting. In contrast, Howell teaches an ink that contains a fatty acid both before and after wetting. In other words, the fatty acid is not formed as part of a hydrolytic reaction.

References relied upon to support a rejection under 35 U.S.C. 103(a) must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, supra. Because the cited combination fails to teach all of the claim limitations of claims 1 and 14, the Office Action has not established a *prima facie* case of obviousness and has not placed the presently claimed disposable absorbent article in the possession of the public. Since claim 16 depends from claim 1, the cited references also fail to teach all of its claim limitations. Therefore, Applicant asserts that claims 14 and 16 are nonobvious over the cited combination and are in condition for allowance.

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Rejection Under 35 USC §103(a) Over Castello, Townsend, Olson and Howell in view of  
Pierce

Claims 12 and 15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Castello, Townsend, Olson and Howell et al, in view of Pierce (WO 00/76438).

In order to establish a *prima facie* case of obviousness, the three requirements discussed above must be met. See MPEP §2143. Applicants respectfully traverse this rejection because the Office Action fails to establish a *prima facie* case of obviousness.

As discussed previously, the Castello reference teaches a wetness indicator comprising a salt that undergoes a color change upon hydration as opposed to the hydrolyzable color composition as recited in claims 1 and 14. Further, it is Applicant's understanding that Townsend is directed to an indicator material that changes from one visible color to another visible color in the presence of saline/urine; Olson et al teaches an absorbent article having a changing wetness indicator printed on an inner surface of a backsheet; and Howell teaches a thermochromatic ink comprising a fatty acid that changes from a solid state to a liquid state when heated, such change effectuating the color change. However, Applicant finds no teaching by Castello, Townsend, Olson or Howell of an ink composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claims 1 and 14.

While Pierce teaches one or more active graphics that when contacted with fluid appear or fade to match the color of the outer cover, Applicant finds no teaching by Pierce of a disposable absorbent article as defined by claim 1 and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction resulting in the graphic becoming visible to the unaided eye, i.e. changing from invisible to visible, as required by claim 1 or as required by claim 14 and containing a wetness indicator comprising a hydrolyzable color composition that undergoes a hydrolytic reaction forming a carboxylic acid, and resulting in said graphic becoming

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visible to the unaided eye, i.e. changing from invisible to visible, as required by claims 14.

References relied upon to support a rejection under 35 U.S.C. 103(a) must provide an enabling disclosure, i.e., they must place the claimed invention in the possession of the public. *In re Payne*, supra. Because the cited combination fails to teach all of the claim limitations of claims 1 and 14, the Office Action has not established a *prima facie* case of obviousness and has not placed the presently claimed disposable absorbent article in the possession of the public. Since claim 12 depends from claim 1 and claim 15 depends from claim 14, the cited references also fail to teach all of its claim limitations. Therefore, Applicant asserts that claims 12 and 15 are nonobvious over the cited combination and are in condition for allowance.

#### Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejections under 35 USC §103(a). Early and favorable action in the case is respectfully requested.

This response represents an earnest effort to place the application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1 - 16 is respectfully requested.

Respectfully submitted,

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